# Collecting Data in Schools with Zena Mello

January 15, 2018

Aaron Wagner:

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Aaron Wagner:

Hi, and welcome to Methodology Minutes. I'm your host, Aaron Wagner. With me today is Zena Mello. Zena is associate professor of psychology at San Francisco State University. This semester, she has been a visiting faculty at the Methodology Center. Her research focuses on the way people think about time, and toward the end of the podcast we will get into that.

Aaron Wagner:

But what we really wanted to do today with something a little different. We wanted to sit down and kind of just discuss what goes into data collection and getting to a little bit of the stories of the humanity that never comes out in publications. Zena, could you just give us a little context on the type of research you were doing? You're working in schools, correct?

Zena Mello:

Yes. So my entire career has been devoted to adolescents, and the most efficient way to collect information about adolescents is to go into high schools. They're sitting in classrooms, they're hopefully paying attention. So yes, I currently work in two high schools in a metropolitan area that are 9th through 12th grade public schools.

Zena Mello:

And what I wanted to kind of share with people today is my experiences about getting into those schools, because this is the piece of the scientific process that is not in any publication and is obviously instrumental for enabling people to conduct science and ask and answer research questions.

Zena Mello:

So I started my faculty position about five years ago. I knew I wanted to collect data with low and common ethnic minority adolescents. And so I started right away with my social networks, identifying people who knew principals that would be open to doing research. In the United States, you need an adolescent to consent to do or participate in your study. You need, actually, an adolescent to assent and the parent to consent. But before you can even go through that process, you have to get a principal to give you access to the high school.

Aaron Wagner:

So what sort of research questions were you looking to answer?

Zena Mello:

Well, at this point in my career, I am devoted to understanding how adolescents think about time and how that's related to resilience. So I was really open to the kinds of questions that I was asking. Initially, and I'm going to talk today about two studies that I've done. The first study I really wanted to look at health outcomes. Drugs, sex and rock and roll. These are the fun things to understand with adolescents, and in terms of my scientific kind of endeavors, I wanted to convince people that this construct of time is really important. So I thought, "Okay, I need to predict something that we already care about in adolescent age groups, and there's nothing like substance-use and risky sexual behaviors to do that."

Zena Mello:

However, asking adolescents about whether not they've used illegal substances and whether or not they've engaged in risky sex actually adds a layer of difficulty and complexity. So principals might be much more likely to let you into their high school to conduct a study on academic achievement or identity. But when you start asking their adolescents about whether or not they've used heroin, those are potentially illegal offenses. And so it adds kind of a layer, a barrier to getting access. I knew this, but because I'm kind of committed to health-related outcomes in these health disparity groups, I was like, "I'm just going to keep my eye on the prize and identify a high school that will participate with me."

Zena Mello:

The other kind of main goal I wanted was to identify a high school that would partner with me for the long term. There's something that is kind of understood, but not in the literature, where people refer to research with ethnic minorities as drive-by research. So it's the idea that primarily European American scholars come into ethnic minority high schools and neighborhoods, they do research, they collect their information, and they publish it and they go away or never heard of again. So I'm very much aware of that kind of criticism about social scientists.

Zena Mello:

With that in mind, I set out to find, identify high schools in this metropolitan area. I started with my social network. I started with people that I knew who knew principals. A year and a half into this process, I still hadn't identified a high school that would work with me. I would find a principal who said, "Oh, I love your ideas. This is going to be a great opportunity for us and for you." And then they would ask their superintendent, and the superintendent would say no.

Zena Mello:

As it turns out, the department of education in the state I was working in was being sued and there was actually a mass opt-out initiative. Parents were receiving an opt-out form for their adolescents, and all they had to do was sign and then their adolescents would be prohibited from completing any survey.

Zena Mello:

So there was multiple levers. One, I am a new professor. Two, I want to study drugs and sex. Three, there's this lawsuit happening. And I just thought, "I'm just going to keep going until I find a principal that buys in." Each time I would make contact with a principal, I would have a meeting, I would make my pitch. Then they'd have to talk to somebody. I was doing this multiple times. In terms of an endeavor, we're talking about five hours a week out of a tenure-track professor's life, and you're balancing, "I have to have data so that I can write grants, and to have published, and have provide my students with thesis data."

Zena Mello:

So at some point I just told myself, "Okay, if I'm going to spend all this time, I want to go to the poorest school in the poorest neighborhood, because that is really the cornerstone of my research is identifying resilience." And I also had startup funds, so I was able to give each kid $10 cash and I thought, "If I'm going to be giving money to people, I want to go to these kinds of schools."

Zena Mello:

I found a school that has some of the poorest air qualities in the poorest neighborhood region, and I just made it my goal to get into the school. Every Friday morning, I would spend 20 minutes to an hour making contact with the staff at the school. It was like the IRS. So I would call them, then they'd put me through to their automated voicemail machine, and then I have to go through that, and then I leave these very enthusiastic and efficient voicemails about my idea for this study. I just kept doing that.

Zena Mello:

Through this process, I ended up making friends with the secretaries in the office, because they were like, "Oh you again? That professor from San Francisco State?" "Yes, it's me. I'm just trying to get five minutes of the principal's time." Now, unbeknownst to me, when I finally did get a meeting with the principal, the front office, you have to imagine parents and teachers and police officers, really almost approaching chaos, phones ringing off the hook. So after I made it into the high school, I understood why I was actually having such a hard time talking to the principal.

Aaron Wagner:

The triage, you just never made it up to the level of significance that you warranted attention.

Zena Mello:

I just kept persisting. One of my mottos is, "Grace and persistence." Smile and just keep going. So every time I would talk to somebody, I would get their name, I kept the file going. And Friday mornings, I would just devote an hour to this endeavor. I gave myself two months and I said, "All right, at the end of the two months, if I haven't made it into this school, I have to cut ties. Because this is not going to be working."

Zena Mello:

So I just kept doing it. And finally, I got the secretary who was really kind of sympathetic to my cause, and she said, "The principal hasn't called you back yet?” Because at that point, I had gotten people to like stick Post It notes to his chair. People kind of have an impression of who I was. And she said, "Oh, you haven't heard from him still?" And I said no. And she said, "That's just terrible." She's like, "Give me a minute." And I'm like, "Okay." And I thought for sure she was going to send me back into the abyss of the phone tree.

Zena Mello:

And then it was the principal on the phone and I was like, "Oh my gosh, this is my moment. This is my moment." And I gave him my five minute pitch. "I'm a junior professor and I'm looking to identify a partnership with a high school. I study resilience and ethnic minority adolescents. Could I have five minutes of your time?" And he said, "Sure." And I said, "Well, when?" And I said, "Whenever you're available." He said, "Okay, how about Monday?" It was a Friday. And I was like, "Okay, great. Thank you so much. Thank you so much." And I did my little victory dance and then I thought, "Okay, now I have five minutes."

Zena Mello:

So I dressed up like it was a job interview for a professor position. I had materials. So one thing I should point out is I am a European-American person, I'm Portuguese and Italian and so sometimes people identify me as an ethnic minority, but I'm not. And so I was very mindful of this issue, and so I made kind of supplemental materials. And these are the kinds of things that never go into an article. I made a reference list of all the principals that I'd ever worked with who supervise ethnic minority high schools, with contact information. I gave them my CV with titles highlighted, demonstrating that I work with ethnic minority adolescents. I worked out my pitch and I made sure that everything was in the mind of the principal. And I knew that this principal was under-resourced and overtaxed.

Zena Mello:

So I go into the office, I'm all dressed up, I get my five minutes with the principal, I sit down at his desk, and it's one of those desks where it doesn't even meet my chin. And I'm like, "Oh gosh." I was so nervous. But I was like, "I had to get into the school." So my pitch was, "I'm the only person in my family to go to college, and now I'm a professor, and I think I figured out why." And he said, "Okay, tell me more." And so I just kept going, "This is the study I want to do. This is what I could offer your school. I can give you money." And then I said, "I can be your in-house scientist. I can ask and answer any question you have, and I can summarize it for you, for grants, for politicians, for lay-people." I'm a researcher. I can't even offer clinical services because I don't know how to do that. So I just thought every way that I could be a value to that school.

Zena Mello:

In the middle of this meeting, a secretary walks in and she looks at me and I look at her. I don't recognize her, I don't know her, and she talks to the principal, and the principal says, "Oh, this is Zena Mello. We might be doing some work with her." And she says, "Zena." She was the secretary I was talking [inaudible 00:10:23] on the phone and she said, "Don't you look wonderful today?" She gave me a big hug. And the principal's like, "What is going on here?" That moment, I know mattered to him because he saw that I had already made a partnership with everyone in the front room. And those people had gone to school there and they were committed to the community.

Zena Mello:

So it's all of these kind of layers that let me go into that school, so he was like, "Great, I believe in you. Let's do this study and next I'll go to my superintendent." And I thought, "Oh no. Gatekeeper." Superintendent said yes. Then we had to get federal clearances. Everyone.

Zena Mello:

Just some interesting comparisons I want to point out, the other high school that I work in is a very high income school. It's also public, same size, about 15 minutes away geographically, but couldn't be more different. And I just want to point out that in the low income school, I have to get federal clearances. In the high income school I did not. In the high income school, I can walk in there, sign a visitor's book, get a sticker that says visitor and go into the high school.

Aaron Wagner:

What are the federal clearances that you need to get?

Zena Mello:

Basically check to see if you've been committed of a federal crime. You go to a trailer, you give them your social security number, your thumbprints, and then they have some kind of clearance, and then once you're approved, then I got a volunteer pass.

Aaron Wagner:

I'm very surprised those differences are at the district level and not at the state level. That's really interesting.

Zena Mello:

Yeah. So the low income school is in a... Yeah, so they're different counties. Even though, I mean, they're juxtaposed. So it's just interesting, because I think we have these assumptions about access and availability. And I think getting a job at both of these schools had their own challenges, but they were unique. And of course this is just one story about one school, but still.

Zena Mello:

So after I get finally get a permission, we're down to the last few days of the school year. And the whole other story is getting my human subjects approval to do studies about drugs and sex in adolescents, which has some literature and people are aware of that. So we were able to pull off the study.

Zena Mello:

I will say, so there are some other issues that happened. I brought my students from San Francisco State, who are all high achieving, to this school that was very low achieving. You have to imagine that this is 1500 students. When they have class transitions, class breaks, those security guards walk around with bull horns yelling, "Go to class, go to class." At the end of a lunch break, it looks like a concert. Trash on the ground. We actually walked by a broken glass on the ground that was there all day long. Physical resources are so apparently lacking in the school.

Zena Mello:

The other issue is that there are more police officers in this school than there are counselors. So again, I work in two schools. One low income, one high income, both 1500 students. In the high income school, they have a clinical psychology center and a school psychology center. Everything is literally shiny. In the low income school, they have three counselors for the entire student population. Both of them are 1500. In the low income school. They have a Sheriff's office in the high school. Room 102 is where the sheriff hang out.

Zena Mello:

So after completing the study, I felt super successful because there were so many layers that had to kind of come together. I had data on how adolescents think about time with my measure that is new and recently validated and yields valid and reliable scores. That was super exciting. And I had data on adolescent substance-use and risky sexual behaviors. These three pieces of information combined enabled me to analyze and write up for our proposal that's now under review at the National Institute of Health.

Zena Mello:

Now with all scientific endeavors, you ask a question and you don't know what the answer is going to be. I developed a new way of thinking about time, which is about past, present, and future. Whether or not adolescents are future-oriented or whether or not they have positive or negative feelings. And when I conducted my preliminary analysis, we found really strong effects.

Zena Mello:

So I can predict whether or not adolescents with the pilot data use substances based on solely how they think about time. Even after controlling for impulsivity.

Aaron Wagner:

You can predict whether they are using substances at that time or whether they will use substances at a later date?

Zena Mello:

Whether they self-reported that they have used in the past. And generally adolescents are pretty honest. We know this from academic outcomes and some substance-use studies that, when you ask them if they've used, they generally are pretty honest. I go through great lengths to show the adolescents that their responses are anonymous. Everything's color-coded, things are in envelopes inside envelopes. It's a part of the script that I use to recruit them, so I do what I can to give them that assurance.

Aaron Wagner:

You talked about what it took to get into the school. Once you were in the school, how did recruitment go within the school? How did you find the process of recruiting students and building trust on that level?

Zena Mello:

I'm so glad you asked that, because the principal gave me permission and he did, through his mechanisms, sent out communication to the teachers. Some of the teachers actually said no. So we would walk into a classroom and say, "Hi, I'm here from San Diego State." We all wore our t-shirts. Everything's branded to kind of help people understand the study and also for impact. And some of the teachers said, "No, you can't come into my classroom. I don't agree with this. This is my classroom and you can't come in and recruit."

Aaron Wagner:

What were some of their objections to the recruitment for the study? Do you know?

Zena Mello:

I think, and honestly there's science about this, I think some teachers are very protective of ethnic minority adolescents and they don't want them used for scientific purposes. And [inaudible 00:16:18], Henrietta Lacks, these are very well known studies but there's a long history of abuse and misuse. And so I think it tied into that.

Zena Mello:

It also is these are teachers working at an incredibly underfunded school. One of the teachers got locked out of his classroom right in front of us. So they actually physically lock the classrooms when the students are in there. And so students got ahold of his keys and here he is, this teacher, knocking on his own door. I mean, chaos is not far from an apt description of this school.

Zena Mello:

So that was one other issue, was that my students are research assistants, and they themselves, I had to kind of have conversations with them because they had never witnessed anything like that. They'd gone to schools with much more resources. So at one point, the adolescents in the school who are mothers, they have a teenage mother program, walked by with their babies. And one of my students just literally her jaw dropped, and I had to ask her, I said, "You need to compose yourself."

Zena Mello:

Okay, my purpose as a professor is to collect good data. But I'm thinking longterm. I have to make a partnership. I want whatever the principal hears about my presence at that school to be, "She was professional. She was a joy. It was great, right? Yes, please invite her back." I knew if there was any kind of issue, that would prohibit my ability to come back to the high school.

Zena Mello:

And so some other issues that happened is the students I work with as undergraduates who helped collect the data are ethnic minority because of the topics of my research that I do. And there was some overt racism that the students experienced by teachers in front of me. So I had to find ways, knowing that I can't upset a teacher because I want to get into this high school. I also have to support my student who just witnessed, who just experienced something really kind of provocative. So I teach classes on race and ethnicity on adolescents. And we can talk about this in a scholarly way, but there's nothing like witnessing it and then understanding the implications. So my African-American student, when she was experienced an overt racist action by a teacher, looked at me and said, "What? That woman is in charge of hundreds and hundreds of thousands of students. What impact does she have on their educational lives?" Now, many of my students use this as kind of, "I'm going to become a school psychologist and work in a school like this." And so they use it as kind of mechanisms of opportunity.

Zena Mello:

So I felt very successful about that school and part of my partnership is to come back and share information. And so I did that. I wrote up lay-people kind of summaries, not even statistics, just averages about substance-use, but also their hopes and dreams for the future. The principal wanted me to ask how the adolescents thought about how this high school in particular contributed to their future. And so I asked open-ended data and I had students code that, and thankfully they said really positive things, because there could have been a moment where I'm like, "Everyone hates your school." I've had principals ask me for adolescents to report their favorite teacher. So some principals will use this as a mechanism to kind of get information.

Zena Mello:

So by this time, the principal and I had developed quite a good rapport. He valued what I had given him. He saw the impact. When I've finished the study, that secretary, I thanked her profusely for being so instrumental and she said, "No, I thank you for showing us respect and for bringing this partnership to our school." So it was just-

Aaron Wagner:

A love fest.

Zena Mello:

Oh yeah. Oh, my students were... I mean, it just almost brought me tears, the whole experience. Now, part of my obligation was to come back and bring these reports, and when I did that, this was around when we elected our current president, and this is a school that's ethnic minority, primarily immigrant. We're talking 85% ethnic minority, predominantly immigrant. And new immigrants. He was concerned about his student population and concerned about their thoughts about race and ethnicity and their future. These students were leaving school. There are also some race related events that happened at the school, that were involving kind of statewide organizations. And so he was concerned about issues related to race, ethnicity, and politics. And we started having these conversations. At the same time I was teaching a class, a graduate class on race and ethnicity and we were, as a country, we were kind of entranced in the political climate.

Zena Mello:

And so he asked me to collect information from the students about how they feel about the president. And so I collected open-ended data at the questions were, "What do you think about the election of Donald Trump, and how's the election of Donald Trump made you active?" They're open-ended questions. I went through the same process...

Zena Mello:

As a professor, I have to also think about my career trajectory. And so this study we called a political study, but it also asks adolescents about sexism, racism, classism, these isms that happen on the school campus and in their home and neighborhood. But I also asked questions about political engagement and civic involvement, because I wanted to bring race and ethnicity into the conversation about how adolescents, who are the future voting people of our country [inaudible 00:21:51] how they think about this whole process. And I'm hoping to link time to a civic engagement.

Zena Mello:

I believe that adolescents who are more likely to think that the past, the present, and the future are related to one another will also be more likely to participate in social actions or to read media about politics. I also asked them if they want a career in politics, as well as whether or not they wanted a career in science, technology, engineering, and math. And in this study, it was really [inaudible 00:22:23] or appeasing or satisfying what the principal wanted, but also what my students are interested in and what I could see filling in terms of a scholarly gap.

Zena Mello:

So I also wanted to talk about the other school that I work in, because I think it offers a kind of natural comparison. So like I said, it's also a public high school, 9th through 12th grade. It's about the same size, 1500 students. It's only 15 minutes away geographically.

Zena Mello:

I'll just say too, the high income school, 100% of the students go on to college. In the low income school, I would say 3% or 5% go on to college. So this is a huge difference in socioeconomic status, which we define as maternal education and primarily maternal education, but also paternal education and occupation.

Zena Mello:

So I basically needed multiple schools so that I could have multiple questions that I could answer, but I actually got into the high income school first. And I knew that, because of my research program, I was going to need to supplement it with a low income school. The high income school, I gained access through my social network. Literally, I asked everyone I knew if they knew what principal and then whoever they knew I would call, and I a school counselor who was able to get me into and have a meeting with the principal.

Aaron Wagner:

Now, just by way of comparison, if I may jump in for a minute.

Zena Mello:

Yeah.

Aaron Wagner:

You talk about kind of the intensity of the environment and just kind of the level of churn of things happening on an extremely regular basis. When you went into the office of this school, was it comparable?

Zena Mello:

Well, just even communication. So at the high income school, I can call them and I can email them and I will get a response within a day. That would never be the case at the low-income school. They just don't have enough resources to answer the phone or return email. So I actually had a scheduled meeting with the principal and all the administrators. They have three associate principals at this school. It had its own challenges, because then I had to convince people who had time to think carefully about the impact of my study. And so it was a different kind of pitch.

Zena Mello:

The staff at the high income school saw right away that, if I could predict using a measure about time that has nothing to do about drugs and sex, if I could use the time measure to predict the likelihood that adolescents are going to engage in risky behavior, that that has profound implications for parents and teachers. They could use it as a diagnostic tool. And so the high income school actually wanted me to start right away with interventions and modifying. I said, "Oh no, we don't know enough. We have to first collect this information."

Zena Mello:

So the high income school was also much more regulated. Their minutes of the day, every classroom started at, let's say, 10:54. And they had three minutes to get to the next class. The school building was clean. It was shiny. At one point, I had the same table set up to receive and distribute materials, and at one point a student or someone had dropped an apple core from the second floor to the first floor. The secretary walked out and said, "Oh, what's this?" Got on the walkie talkie called the janitor. Two janitors came and literally cleaned up the apple, wiped the floor, and had a little conversation about it.

Zena Mello:

To me it was just so such a sharp comparison to the school that was just literally 15 minutes up the road. Something that I always point out to my students is that those students in the high income and low income school, they're taking the exact same standardized tests. They're being held the same expectations. Even though the resources to support their educational pursuits are vastly different. Even though the teachers might be equally committed and passionate about their success, their own resources are just sharply different.

Zena Mello:

So the school itself was shiny, brand new. They had a pool. They had a theater. I've worked in some high income schools where they have a pottery studio. The low income school, obviously you have an impression already, but the principal actually wrote a grant and got money to get new office furniture, and he told me the last time they had new office furniture was in the 1970s.

Zena Mello:

So just huge differences that I think you could look at the building and see a difference, but then you have to use that as an indicator for educational resources, academic support. However, the high income school had its own challenges, incredibly high rates of anxiety. So I had collected information and I'd use the same format, collected surveys. Then gone back to the high schools and asked the principals, "What would you like to know about your adolescents or your students?" And they want to know about mental health. Their levels of anxiety were twice the national average. We also have the experience where students didn't want to do the survey because they didn't have time. Because they were taking finals and they wanted to make sure that they had the best grade possible. And these are students who are getting 4.25s, right? Who are incredibly high academic achievement.

Zena Mello:

So I started to see these two contacts, and we know this from adolescent development, as there are strengths and weaknesses, there's opportunities and challenges in both the schools that... Coming from a high income school doesn't necessarily mean that everything is easy and everyone is high-functioning. Each of them have their own challenges.

Zena Mello:

In another school I worked at in another state, I made it as far as the superintendent. And the superintendent had a research office, and I thought, "This is great." He said, "Dr Mello, I'm really excited about your work on time. I think this is going to be exciting." And he said, "Here's a list of the topics that you can't study in our schools." And they were all the fun ones, drugs, sex, rock and roll, bullying, harass, anything. The PTA was very well organized in this city, and they had gotten together and influenced the superintendent so that these topics could not be studied in their schools.

Aaron Wagner:

That's so bizarre.

Zena Mello:

So I think often, people, students especially who are new to the field, don't realize that there isn't an obligation to let a scientist come into your high school. That that's an arrangement, and that's a partnership. And that's kind of what I wanted to talk about today, was all of the steps. These are years in the making.

Zena Mello:

So the high income school also wanted to understand how their students thought about the election of Donald Trump. They have identified alt-right kids in their school. And so I use the same process as I had done before. However, I didn't have enough funds to give them money. And so in the political study at both the high income and low income school, I used pizza. And the principals, both principals, were like, "Oh, they'll do anything for pizza, those kids." So I negotiated with a pizza company to get 250 pizzas made, and then I had to do pizza math. How many pizzas can I get in my car? How they cars do I need to get the pizza? So we were in the pizza business for a solid two weeks. But pizza did not do as well as cash.

Zena Mello:

And this is another reason why if you want to have large scale representative studies that include diverse populations, if you want to do studies that include people across time, you have to compensate them. For years, I've been using $10. $10 doesn't really work anymore. When I use $10 with the health study, I had about 65% return, which was actually really good and comparable to other studies in the literature. When I used pizza it dropped to 20%. Yeah, so pizza doesn't do it.

Zena Mello:

So, but these are all of the kinds of issues that you have to think about when doing social science research that are independent of theory, measurement, right? And you don't take classes on. These are things that you have to kind of learn through your own doing.

Aaron Wagner:

Well thanks for sharing your experiences on those sorts of topics with us. Before we wrap up, I want to ask you kind of about the future. So now that you've done these studies, and you have a relationship with the two schools, what are you looking to do?

Zena Mello:

Well, I've submitted an [RO-1 00:30:59] to the National Institute of Drug Abuse to look at how my measure that I developed, time perspective, predicts substance use and comorbid outcomes. Specifically mental health and sexual risk behaviors in both of these high schools. I'm proposing to do that across time, because longitudinal data is so essential for understanding directionality, but also for sample size because we want to be able to look at these relationships for different health disparity subgroups.

Zena Mello:

Both the schools have agreed to partner with me. I'm looking forward to being able to come back to the schools, to pay the adolescents, to look at age differences in these relationships between time perspective and substance-use and other comorbid outcomes.

Aaron Wagner:

Cool. Well, if there are any reviewers listening, Zena's very passionate and very smart, and you should definitely give her the grant. Zena, thanks a lot for talking with me.

Zena Mello:

Thank you so much. It was great.

Aaron Wagner:

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